PATENT COOPERATION TREATY

REC'D 1 1 AUG 2005

From the					WIPO F
INTERNATI	ONAL SEARCH	ING AUTH	ORITY		• .
CALFEE, I	IYERS-PAYNE HALTER & GRIS I THIRD CENTI BUS, OH 43215	er, 21 east	STATE STREET		PCT ITTEN OPINION OF THE DNAL SEARCHING AUTHORITY
					(PCT Rule 43bis.1)
		,		Date of mailing (day/month/year)	0 9 AUG 2005
Applicant's	or agent's file re	ference		FOR FURTHER	ACTION See paragraph 2 below
22727/0430)9				See paragraph 2 below
	al application No.	• ,	International filing date	(day/month/year)	Priority date (day/month/year)
PCT/US05	/09238	-	21 March 2005 (21.03.2	.005)	22 March 2004 (22.03.2004)
Internation	al Patent Classific	cation (IPC)	or both national classificat	ion and IPC	
IPC(7): C1	2N 15/86, 15/85,	15/87 and U	S C1.: 435/455, 456		
Applicant					į
THE OHIO	STATE UIVER	SITY RESE	ARCH FOUNDATION		
1. This o	pinion contains ir	ndications re	lating to the following item	n6:	
	Box No. I	Basis of th	e opinion		
	Box No. II	Priority		•	
	Box No. III	Non-establ	lishment of opinion with r	egard to novelty, inve	ntive step and industrial applicability
	Box No. IV	Lack of un	ity of invention		
	Box No. V	Reasoned applicabili	statement under Rule 43bi ty; citations and explanati	s.1(a)(i) with regard to ons supporting such s	o novelty, inventive step or industrial . tatement
	Box No. VI	Certain de	cuments cited		
	Box No. VII	Certain de	fects in the international a	pplication	
	Box No. VIII	Certain ob	servations on the internati	onal application	
	THER ACTIO				
Intern Auth	national Prelimin	ary Examin his one to be	ing Authority ('TPEA'')	except that this does n IPEA has notified t	be considered to be a written opinion of the s not apply where the applicant chooses an he International Bureau under Rule 66.1bis(b) lered.
IPEA of Fo	a written reply to frm PCT/ISA/220	together, who	ere appropriate, with amer e expiration of 22 months	ndments, before the ex	PEA, the applicant is invited to submit to the xpiration of 3 months from the date of mailing , whichever expires later.
For	further options, se	e Form PCT	/ISA/220.	•	
3. For 1	further details, see	notes to For	m PCT/ISA/220.		·
	•				
Name and	l mailing address		US	Authorized offic	er //WWW.Hhlats
	Mail Stop PCT, At Commissioner for			Konstantina Ka	tcheves
	P.O. Box 1450				,
Facsimile	Alexandria, Virgin No. (703) 305-3			Telephone No.	(703) 305-3388
	/ISA/237 (cover s		у 2004)		

International application No.

PCT/US05/09238

Box No.	I Basis of this opinion
	gard to the language, this opinion has been established on the basis of the international application in the language in which it ed, unless otherwise indicated under this item.
	This opinion has been established on the basis of a translation from the original language into the following language, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
	gard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed on, this opinion has been established on the basis of:
a.	type of material
	a sequence listing
	table(s) related to the sequence listing
ъ.	format of material
	in written format
	in computer readable form
c.	time of filing/furnishing
	contained in international application as filed.
	filed together with the international application in computer readable form.
	furnished subsequently to this Authority for the purposes of search.
3.	In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additio	onal comments:
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	·
- DCVI	VISA/237/Box No. D. (Tonuery 2004)

International application No.
PCT/US05/09238

Box No. V Reasoned statement under Rule 43 h applicability; citations and explanati	bis.1(a)(i) wi	ith regard to nove ting such stateme	elty, inventive :	step or industrial
1. Statement		•		
	Claims 1	i.5		YES
Novelty (N)	Claims 1			NO
Inventive step (IS)	Claims 1	-15		YES
	· Claims 1	NONE		NO
7-4-4-1-11:1:1:4- /TAN	Claims 4	L-15	•	YES
Industrial applicability (IA)	Claims 1 Claims N			1BS
	James I	, , ,		
2. Citations and explanations:		· · · · · · · · · · · · · · · · · · ·		
г. Спаноть ани сърганацонь.				
		:		
Claims 1-15 meet the criteria set out in PCT Article 33(2 claimed invention.	2)-(3), becaus	se the prior art does r	not teach or fairly	suggest the method of the
The invention of the intant claim is drawn to a method c culturing the transfected packaging cell line, culturing m packaging cell line is a phoenix cell line, the expression	iammalian na	aural killer cells in tl	ne medium with t	he packaging cell line. The
Liberatore et al. teach a method of transfecting natural k				•
Liberatore et al. teach a method of transfecting natural k lines. Liberatore et al., however, fail to teach that the ma	atural killer co	ells are grown in the	same medium wi	ith the packaging cell line.
Notal et al. and Cheng et al. generally teach phoenix page	ckaging cell li	ines, not a method o	f tranfecting natu	ral killer cells.
Claims 1-15 the criteria set out in PCT Article 33(4), an				
made or used in industry.				
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X-		•		
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Form PCT/ISA/237 (Box No. V) (January 2004)	•			

PATENT COOPERATION TREATY

From the

REC'D 1 1 AUG 2005
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	•				
3. For f	further details, see	notes to For	m PCT/ISA/220.		
Name and	i mailing address	of the ISA/	US	Authorized offic	es Mark Illa late
	Mail Stop PCT, At Commissioner for			Konstantina Ka	tcheves
	P.O. Box 1450				/
Facsimile	Alexandria, Virgin No. (703) 305-3	1430 - در دعد 230		Telephone No.	(703) 305-3388
Form PCT	/ISA/237 (cover s	sheet) (Januar	y 2004)	-	

International application No.
PCT/US05/09238

DUX INV. I	Basis of this optimon
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4. Addition	al comments:
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1	

Form PCT/ISA/237(Box No. I) (January 2004)

Form PCT/ISA/237 (Box No. V) (January 2004)

International application No. PCT/US05/09238

Statement		
	Claims 1-15	YE
Novelty (N)	Claims NONE	NO
Inventive step (IS)	Claims 1-15	YE
	Claims NONE	
	Claims 1 15	YE
Industrial applicability (IA)	Claims 1-15 Claims NONE	NC
	Claims NONE	
O' I' and a serious		
Citations and explanations:		
	•	•
ulturing the transfected packaging cell line, cultured ackaging cell line is a phoenix cell line, the expression	thod comprising transfecting a packaging cell wit ring mammalian natural killer cells in the mediun ession vector is PINCO, the natural killer cells inc	clude CD56 ^{bright} and CD56 ^{dim} .
ulturing the transfected packaging cell line, culturackaging cell line is a phoenix cell line, the expresiberatore et al. teach a method of transfecting names. Liberatore et al., however, fail to teach that lotal et al. and Cheng et al. generally teach phoenical states and the criteria set out in PCT Article 33.		chude CD56 ^{kright} and CD56 ^{dim} . e phoenix and PA317 packaging of lium with the packaging cell line, and patural killer cells.
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